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March 6, 2000

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M&E BIOTECH LICENSES AUTOVAC™ TECHNOLOGY TO SCHERING-PLOUGH ANIMAL HEALTH

HØRSHOLM, Denmark, March 6, 2000 — M&E Biotech A/S today announced an agreement with Schering-Plough Animal Health (SPAH) granting SPAH an exclusive license to its AutoVac™ technology for the development of veterinary products, including therapeutic vaccines. SPAH is the worldwide animal health business of Schering-Plough Corporation of the United States.

The agreement provides for M&E Biotech to receive an upfront payment and milestone payments, as well as profit sharing. Additional financial information is not being disclosed.

Søren Mouritsen, CEO of M&E Biotech, said, "We view the development of veterinary products as complementing our primary research efforts, which are focused on developing products for serious human diseases. Schering-Plough Animal Health has experience with therapeutic vaccine development and has the marketing capabilities to exploit the full potential of veterinary products resulting from this agreement."

M&E Biotech developed the AutoVac™ technology, which breaks immunologic tolerance to self-proteins and thus specifically induces a controlled, transient polyclonal therapeutic immune response towards selected pathogenic self-proteins.

M&E Biotech is a Danish biotechnology company committed to the development of therapeutic vaccines for the treatment of chronic human diseases such as inflammation, cancer and asthma. In July 1999, M&E Biotech published the preclinical data supporting the AutoVacTM technology concept in Nature Biotechnology (Dalum, Iben et. al., "Therapeutic antibodies elicited by immunisation against TNFα", Nature Biotechnology 1999, 17: 666-669).

Schering-Plough Corporation, based in Madison, N. J., USA, is a research-based company engaged in the discovery, development, manufacturing and marketing of pharmaceutical products worldwide.

For information, please contact M&E Biotech A/S: Søren Mouritsen, CEO



M&E Biotech A/S

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17 April 2000

M&E Biotech A/S and H. Lundbeck A/S enter into a research and development agreement

Press Release

M&E Biotech A/S and the pharmaceutical company H. Lundbeck A/S have entered into a research and development agreement regarding the use of M&E Biotech's AutoVac™ technology for the development of a pharmaccine (therapeutic vaccine) for the treatment of human neurodegenerative disorders. This group of disorders includes for instance Alzheimer's disease, also called presenile dementia.

The project will be carried out in close co-operation between scientists at M&E Biotech and Lundbeck. According to the agreement Lundbeck will fund all research, development, manufacture and marketing of the final product. Furthermore, Lundbeck provides M&E Biotech a minor up front payment and, dependent on the results achieved during the course of the entire project, milestone payments of approximately DKK 150 million. M&E Biotech is also entitled to receive royalties from sales of the final products. Lundbeck moreover has required the right to invest DKK 10 million in M&E Biotech shares on specific terms.

"This project is very exciting and the potential for patients could be significant, provided the research results turn out positive", says Executive Vice President Dr Claus Bræstrup, Head of Research & Development in Lundbeck.

"M&E Biotech is looking very much forward to commencing this co-operation with Lundbeck. We regard it as incredibly positive that two Danish companies can join in utilising their research and development expertise. Lundbeck is a very important partner for M&E Biotech in our future endeavour to exploit the company's AutoVac™ technology for the development of new drugs within a series of important chronic diseases", says Dr Søren Mouritsen, CEO of M&E Biotech.



M&E Biotech A/S was founded in 1990 and is committed to the development of therapeutic vaccines for the treatment of serious, chronic diseases, such as chronic inflammation, asthma and cancer.

Based on a genomics technology M&E Biotech is also working on identifying target proteins, which could eventually lead to the discovery of whole new drugs. The company has 56 employees, of which 51 are working within research and development.

H. Lundbeck A/S is an international pharmaceutical company engaged in the research and development, production, marketing and sale of drugs for the treatment of psychiatric and neurological diseases. It had consolidated net turnover of DKK 4.2 billion in 1999 and employs approximately 2,800 people.

For further information please contact CEO Søren Mountsen at phone +45 45 16 25 25



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May 31, 2000 Release no. 3/00

Not for distribution in the United States

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To the Copenhagen Stock Exchange and the press

Offer of shares in M&E Biotech subscribed 3 times

The initial public offering of 1,500,000 shares in M&E Biotech A/S (M&E Biotech) generated substantial interest in Denmark as well as abroad. The offer was subscribed 3 times at the top of the offer price interval. The shares have been placed with more than 2,600 private investors in Denmark and a large number of Danish and international institutional investors. Approximately 63% of the shares have been placed in Denmark and approximately 37% of the shares have been placed with international investors, primarily in the rest of Scandinavia, Germany, Switzerland and France as well as in the U.S. and the U.K.

In consultation with the underwriters M&E Biotech has set the offer price at DKK 250 per share, which is just below the middle of the offer price interval of DKK 230 – 280 per share.

CEO Søren Mouritsen says: "We are very happy with the substantial interest and confidence we have experienced from both private and institutional investors in connection with the IPO. We look forward the apply the proceeds from the IPO in the realisation of our vision of becoming a leader within the development of pharmaccines and discovery of novel drug targets. We are especially proud of the investor backing when seen in the light of the general negative developments on the international stock markets and of the U.S. biotechnology indices in particular since the offering circular was made public. Nevertheless, based on the recommendation from our financial advisors, we have found it prudent the set the offer price as mentioned above".

The offer comprised 1,500,000 new shares contributing total proceeds (gross) to the company of approximately DKK 375 million. Following the offer, the number of shares in the company totals 3,994,980 shares of DKK 10 nominal value each (if the overallotment option provided to the underwriters is not exercised).



Due to the large demand from private investors in Denmark, it has been decided to limit allocations to investors who have subscribed for shares up to and including DKK 2 million. Investors who have submitted orders for up to and including DKK 2 million will be fully allocated up to 25 shares plus an additional 20% of any subscription that exceeds 25 shares, rounded to the nearest integer number of shares.

Subscriptions for more than DKK 2 million have been allocated individually.

Following the offer of 1,500,000 new shares, the principal shareholders and founders, CEO Søren Mouritsen and board member Henrik Elsner, owns a total of 22.3% of the shares in M&E Biotech, while 37.5% of the share capital is owned by the investors that have participated in the offer.

The company and GlueTech ApS have granted Carnegle Bank and Aros Securities Bank an option to overallot up to 250,000 shares. This rights is exercisable until July 6, 2000. If the underwriters choose to exercise this option, the company will receive additional net proceeds of DKK 25 million, whereas GlueTech ApS will receive net proceeds of DKK 37.5 million.

The Copenhagen Stock Exchange has approved the distribution of the shares, which will be listed as of today Wednesday, May 31, 2000 from 10.00 am, Copenhagen time.

Hørsholm, May 31, 2000 M&E Biotech A/S

Søren Mouritsen

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This is not an offer for sale of shares in the United States. Shares may not be sold in the United States absent registration or an exemption from registration under the U.S. Securities Act of 1933, as amended. M&E Blotech A/S does not intend to register any portion of the offer in the United States or conduct a public offering of shares in the United States.



To the Copenhagen Stock Exchange and the press

Release no. 3/2002

Pharmexa announces that GlaxoSmithKline has exclusive option on HER-2 Protein Breast Cancer project

In June 2001 Pharmexa announced that it had in-licensed a vector-cell production system from GlaxoSmithKline for use in Pharmexa's AutoVac™ HER-2 Protein project against cancer. No further details were announced at that time.

The manufacturing of the AutoVac™ HER-2 Protein pharmaccine has now been successfully transferred to a contract manufacturer and animal toxicology studies will commence in April 2002 with a view to initiating clinical trials in early 2003. Beyond this point, switching to a different production system would cause a significant delay in the project. On this basis, the parties have agreed to disclose that GlaxoSmithKline, as part of the aforementioned licensing agreement, has an exclusive option to negotiate a license for the AutoVac™ HER-2 Protein project for a period after completion of phase I. This option does not cover the AutoVac™ HER-2 DNA project currently in phase I/II clinical trials.

If GlaxoSmithKline or any other licensee acquire rights to the AutoVac™ HER-2 Protein project, Pharmexa expects to receive upfront, milestone and royalty payments on sales of finished products. Until then, the agreement has no economic effect in Pharmexa.

Hørsholm, April 12, 2002

Birger Borregaard

Chief Operating Officer

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Note to editors:

Pharmexa A/S (CSE: PHARMX) is a leading company in the field of therapeutic vaccines for the treatment of serious chronic diseases. Pharmexa's proprietary AutoVac™ pharmaccine technology platform is broadly applicable, but the company has focused its resources on a number of cancer forms and chronic inflammatory diseases. Pharmexa's research and development programs are targeted towards breast cancer, asthma, bone degeneration, allergy and neurodegenerative diseases. The Pharmexa Group has entered into collaborative agreements with Lexigen/Merck KgaA, Ferring, Schering-Plough, H. Lundbeck, NeuroSearch and AstraZeneca. The Group has 145 employees. More information on Pharmexa can be found on www.pharmexa.com.



The cancer protein targeted by Pharmexa's two breast cancer vaccines is a cancer growth factor called HER-2. HER-2 is present in many cancer forms, including breast, ovary, uterus, stomach, bladder, prostate, colon and lung cancers. Pharmexa's AutoVac™ HER-2 DNA vaccine induces the immune system to launch killer cells against the cancer and in addition also leads to the creation of antibodies against the HER-2 Protein. The AutoVac™ HER-2 Protein vaccine works through the creation of a very high level of antibodies.



To the Copenhagen Stock Exchange and the press

Not for distribution in the United States

Release no. 13/2001

Pharmexa initiates phase I/II trials in breast cancer in Denmark

Pharmexa has received approval from the Danish health authorities and ethical committees to initiate phase I/II trials in breast cancer patients with the company's HER-2 DNA AutoVac™ therapeutic vaccine.

- Pharmexa's therapeutic vaccine constitutes an entirely new treatment paradigm in breast cancer.
- The goal is a new and better treatment for late stage breast cancer patients where it may be possible in the long run to avoid chemotherapy and radiation treatment altogether.
- Three hospitals in Denmark participate, with leading cancer specialists associated with the trial. One additional hospital in London is planned to participate once the trial is approved in the United Kingdom.

How does Pharmexa's product work?

Pharmexa's vaccine works by stimulating the patient's own immune response to participate in the treatment of the cancer. This is achieved with Pharmexa's proprietary AutoVac™ technology. With the AutoVac™ technology it is possible to point out to the immune system a certain protein known to be important for the growth of the cancer in such a way that this protein is now recognised by the immune system. Subsequently, the immune system attacks the protein with antibodies as well as with so-called killer cells.

The cancer protein targeted by Pharmexa's therapeutic vaccine is a growth factor called HER-2. HER-2 is present in many cancer forms, including breast, ovary, uterus, stomach, bladder, prostate, colon and lung cancers. Pharmexa's HER-2 DNA AutoVac™ vaccine induces the immune system to launch killer cells against the cancer and in addition also leads to the creation of antibodies against the HER-2 protein. Pharmexa is also working on another version of the product that works primarily through the creation of antibodies. This product is in preclinical development and is expected to enter into clinical trials in patients within 1½ year.

Brief description of breast cancer and existing treatment options

Breast cancer is the most common cancer form among women and the most common cause of cancer death among women in Denmark, where approximately 3,500 women are diagnosed with breast cancer every year. The disease is primarily treated with surgery, possibly in combination with chemotherapy and/or radiation treatment. There is an urgent need for better treatment options.



The HER-2 protein is over expressed in up to 30% of breast cancers. HER-2 is a factor in the uncontrolled growth of the cancer cells and is usually associated with a poor prognosis for the patient. A number of treatment options exists against breast cancer, including the monoclonal antibody Herceptin, which works by targeting HER-2. This drug is in the process of achieving status as first line treatment in the United States and has over the course of the last three years achieved annual sales exceeding 275 million dollars.

Pharmexa's product is aimed at the same target as Herceptin, but there are two significant differences: Firstly, Pharmexa's product leads to the formation of killer cells, which selectively attack the cancer cells. In this way Pharmexa hopes in the longer run to be able to avoid chemotherapy and radiation treatment altogether. Herceptin does not lead to the formation of killer cells. Secondly, Pharmexa's product induces the patient's immune system to create its own antibodies. These antibodies are known to be more effective than artificial antibodies, which are administered intravenously at a hospital, as is the case with Herceptin.

Herceptin was recently approved for the treatment of breast cancer in Denmark, but with a price of approximately DKK 100,000 for six months treatment, its use in Denmark has been limited. Common to Herceptin and other monoclonal antibodies are their very high production costs and the large amount of product that needs to be administered. There will therefore also be significant health economic advantages with Pharmexa's technology, because production costs as well as the amount of product that needs to be administered will be much smaller, and hospitalisation during administration is not necessary.

What are the objectives of Pharmexa's phase I/II trial?

The primary objective of the trial is to evaluate the safety of Pharmexa's therapeutic vaccine. Other objectives are to observe if HER-2 specific killer cells as well as HER-2 specific antibodies can be induced with the AutoVac[™] concept, and finally to evaluate the efficacy of the treatment in the form of turnour response. The plan is to enrol 27 patients in the trial, which will take place at four hospitals, three in Denmark and one in the United Kingdom. Depending on the speed at which patients are enrolled, Pharmexa expects to announce preliminary data from the trial in the course of 2002.

Pharmexa has established a clinical advisory board with Professor Henning Mouridsen, Rigshospitalet, Copenhagen, Professor Charles Coombes, Hammersmith Hospital in London and Professor Cornelis J. M. Melief, University Hospital Leiden, the Netherlands, as external experts.

What is Pharmexa's strategy in the breast cancer area?

Pharmexa has kept all rights in the company's HER-2 AutoVac™ program. It is Pharmexa's strategy to take the product through the initial clinical phases and past phase II before the program is outlicensed to a third party. Pharmexa has the financial resources to follow this strategy and has in addition over the course of the last year established a development department consisting of some of the most experienced drug developers in Scandinavia. On this background Pharmexa expects to add significant value to its HER-2 AutoVac™ program in the coming years.

f/Søren Mouritsen

Chief Executive Officer

√akob Schmidt

Chief Financial Officer



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Pharmexa A/S (CSE: PHARMX) is a leading company in the field of therapeutic vaccines for the treatment of serious chronic diseases. Pharmexa's proprietary AutoVac™ pharmaccine technology platform is broadly applicable, but the company currently focuses its resources on a number of cancer forms and chronic inflammatory diseases. Pharmexa's research and development programs are targeted towards breast cancer, rheumatoid arthritis, Crohn's disease, asthma, osteoporosis, allergy and prostate cancer.

Pharmexa has entered into collaborative agreements with Ferring, Schering-Plough, H. Lundbeck and NeuroSearch. The company was founded in 1990 and has 100 employees, of which more than 85 are engaged in research and development.



To the Copenhagen Stock Exchange And the Press

Not for distribution in the United States

Release no. 14/2001

Pharmexa presents important pre-clinical data in its AutoVac™ HER-2 breast cancer programme

At the 11th International Congress of Immunology held in Stockholm on 22-27 July 2001, Pharmexa presented important new pre-clinical data from its AutoVac™ HER-2 programme.

Pharmexa and its scientific and industry collaborators have shown in multiple different preclinical models that the inclusion of T-cell epitopes can dramatically enhance the effectiveness of both DNA and protein vaccines resulting in the ability to raise effective immune responses to self-proteins that are otherwise tolerated by the immune system. This is the principle behind the AutoVac™ technology. HER-2 is a self-protein actively involved in the genesis and growth of a variety of human tumors including breast and ovarian cancer. Thus, HER-2 is an attractive target for active immunotherapy utilizing the AutoVac™ approach.

To test the potential effectiveness of AutoVac[™] HER-2 vaccines, Pharmexa prepared two different animal models using autologous transgenic mice. Further, a number of AutoVac[™] HER-2 DNA and protein vaccines were constructed.

Several important conclusions can be drawn from these studies:

Vaccination against HER-2 using AutoVac™ DNA and protein vaccines induced significant protection against cancer in mice.

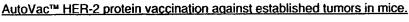
Tumor growth in AutoVac™ HER-2 DNA vaccinated mice was significantly reduced compared to that seen in control animals. Approximately 50% of the mice in the treatment group became tumor free. On average, AutoVac™ DNA vaccinated mice showed a 70% reduction in tumor size compared to the control group. AutoVac™ HER-2 DNA vaccination elicited anti-HER-2 antibody responses in the mice that were consistently higher than those in the control group but it was shown that CTLs ("killer cells") were the primary effector mechanism for tumor inhibition. This is important because it is now widely recognized that a truly effective cancer immunotherapy must include CTLs that can directly attack and kill cancer cells.

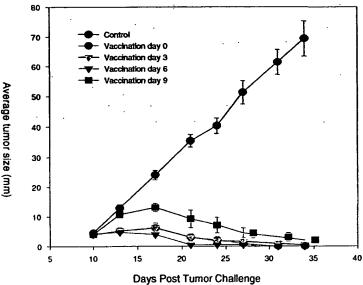
AutoVac™ HER-2 protein vaccination likewise provided significant protection against the tumor. Approximately 95% of the mice in the treatment group became tumor free. The studies confirmed that the insertion of a T-cell epitope significantly enhanced the immune response leading to an up to threefold increase in antibody response.



When vaccination was applied after the onset of the cancer, as a true therapeutic vaccine, an AutoVac[™] pharmaccine could successfully be used to treat already established tumors.

A single vaccination with AutoVac[™] HER-2 protein dramatically inhibited the growth of tumor cells in mice, even when the vaccination was delayed up to 9 days after tumor implantation. In contrast vaccination with the unmodified HER-2 protein was much less effective, consistent with Pharmexa's findings that the AutoVac[™] vaccines induced higher and more rapid antibody responses. This is shown in the panel below where effectively all mice in the treatment group were tumor free by the end of the observation period. More specifically, in this experiment only 5 mice of a total of 40 AutoVac[™] vaccinated mice had small non-progressing tumors by the end of the observation period. In contrast, when vaccinated with un-modified HER-2 protein 40 out of 40 mice developed tumors.





The studies confirmed that different tumors can respond differently to immune effector mechanisms, highlighting the importance of the ability of the AutoVac™ technology to induce both antibody and CTL responses.

The study likewise confirmed Pharmexa's and its collaborators' earlier findings in multiple animal studies that AutoVac™ molecules consistently lead to dramatically improved immune responses compared to non-modified vaccine molecules.

Taken together, these results show that AutoVac™ vaccination against HER-2 is potentially an effective means of breast cancer therapy. The efficacy in humans of such therapeutic vaccination will likely depend on the nature of the tumor itself, its susceptibility to different host effector mechanisms and the robustness of the immune response. The AutoVac™ approach can be utilized with both DNA and protein vaccines resulting in strong humoral and cellular immune responses, thus increasing the likelihood of therapeutic effect.



Hørsholm, 1st August 2001

Søren Mouritsen Chief Executive Officer

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Pharmexa has entered into collaborative agreements with Ferring, Schering-Plough, H. Lundbeck and NeuroSearch. The company was founded in 1990 and has 100 employees, of which more than 85 are engaged in research and development. Pharmexa also owns 84% of Inoxell, a company active in the post-genomics field.

Pharmexa's approach in breast cancer is to stimulate the patient's own immune response to participate in the treatment of the cancer. This is achieved with the company's proprietary AutoVac™ technology. With the AutoVac™ technology it is possible to point out to the immune system a certain protein known to be important to the growth of the cancer in such a way that this protein is now fought by the immune system. The immune system attacks the protein with antibodies as well as with so-called killer cells.

The cancer protein targeted by Pharmexa's therapeutic vaccine is a growth factor called HER-2. HER-2 is present in many cancer forms, including breast, ovary, uterus, stomach, bladder, prostate, colon and lung cancers.

On July 9, 2001 Pharmexa announced that it had received approval from the Danish health authorities to initial clinical phase I/II studies in breast cancer patients in Denmark. These studies will initially take place in three centres in Denmark and one in the UK, once the trial is approved here.

Important notice: This press release may contain forward-looking statements, which are subject to c nsiderable uncertainty. W would lik to cauti n you that actual results might differ mat rially from the se projected in any feward-looking statements mad herein.



To the Copenhagen Stock Exchange and the Press

Not for distribution in the United States

Release no. 16/2001

Pharmexa publishes important pre-clinical data in its AutoVac™ IL5 asthma programme

New data indicates that active vaccination with Pharmexa's proprietary AutoVac[™] technology represents a completely new approach for the treatment of asthma. The new data is published in the recent issue of Journal of Immunology (Hertz et al., Vol. 167: p. 3792, 2001), one of the worlds' most prestigious scientific journals in the field of immunology. The article is based on a series of studies performed in collaboration between scientists at Pharmexa and the John Curtin School of Medical Research, Canberra, Australia.

IL5 and its role in asthma

In recent years it has been established that the self-protein IL5 plays an important role in chronic asthma. IL5 is involved in recruiting certain inflammation cells called eosinophils into the airways and lungs where they contribute to the progression and severity of the disease. Several studies performed by others have shown that down regulation of IL5 using monoclonal antibodies leads to a reduction in the number of eosinophils in the lungs and improves asthma symptoms in mice and monkeys.

Together with Dr. Paul S. Foster and his group at the John Curtin School of Medical Research, Pharmexa tested the effect of an AutoVac™ DNA vaccine against IL5 in a number of relevant pre-clinical asthma animal models. The aim was to induce a specific therapeutic immune response in the form of polyclonal antibodies against IL5.

Several important conclusions can be drawn from these studies:

AutoVac™ DNA vaccination induced a strong immune response against IL5

In 30 out of 30 mice polyclonal antibodies could be detected after AutoVac™ DNA vaccination. None of the 40 mice in the control group developed antibodies. It was shown that antibodies elicited with the AutoVac™ vaccination were able to attack and down regulate IL5, as expected.

AutoVac™ DNA vaccination against IL5 dramatically reduced the number of eosinophils in the lungs

In three different mouse models the level of inflammation as indicated by the number of eosinophils in the body was dramatically reduced. Eosinophils were reduced in both the lung fluid and the blood, indicating a broad effect of the vaccination.



AutoVac™ DNA vaccination against IL5 restored lung function in asthmatic mice

Most importantly, the findings that an immune response was elicited against IL5 and that the number of inflammation cells in the lung and blood was reduced also translated into improved lung function. In two different models of asthma in mice, Pharmexa and its Australian collaborators showed that AutoVac™ DNA vaccination against IL5 was able to completely normalise the lung function in asthmatic mice. The mice in effect were cured.

Further studies indicated that Pharmexa's vaccine also had a profound inhibitory effect on other proteins believed to be involved in allergic asthma, such as IL4 and IL10, which may also have contributed to the dramatic improvements observed. The ability of Pharmexa's vaccine to induce these added effects may give it an important advantage over other therapeutic approaches, such as passive vaccination with monoclonal antibodies against IL5.

When will Pharmexa start phase I/II studies in asthma?

Pharmexa's AutoVac™ IL5 DNA programme is currently in the pre-clinical phase. Pharmexa expects to submit an application to initiate phase I/II studies in asthma patients before the end of next year. The primary objective of these studies will be to evaluate the safety of Pharmexa's therapeutic vaccine. Other objectives are to observe if IL5 specific antibodies can be induced by the AutoVac™ concept, and finally to evaluate the efficacy of the treatment in the form of symptom reduction. Pharmexa currently owns all rights to the IL5 programme.

Brief description of asthma

Asthma is one of the most common chronic diseases worldwide and affects more than 130 million people. More than 80% of the cases develop in individuals younger than 45 years of age. In the EU and the United States asthma is thought to affect 38 million people.

Asthma is a costly disease due to its high prevalence in the young and middle-aged members of society. According to WHO, the socio-economic costs associated with asthma exceed those of tuberculosis and HIV/AIDS combined.

Current methods of treatment are focused on long-term control and quick relief of symptoms related to chronic and acute asthma. The side effects related to the majority of the available medications of which corticosteroids have the highest market share, make AutoVac™ IL5 DNA a possible first line treatment of patients suffering from severe asthma.

At present, two other pharmaceutical companies are testing anti-IL5 monoclonal antibodies in phase II multicentre clinical trials. However, IL5 has never before been the target of an active vaccination strategy, potentially making Pharmexa's vaccine the first in a whole new class of asthma products with added benefits.

Hørsholm, 20 September 2001

Øøren Mouritsen

Chief Executive Officer

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Note to editors:

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Pharmexa has entered into collaborative agreements with Ferring, Schering-Plough, H. Lundbeck and NeuroSearch. The company was founded in 1990 and has 110 employees, of which more than 90 are engaged in research and development. Pharmexa also owns 84% of Inoxell, a drug development company based on post-genomics technology.

Pharmexa's approach in asthma is to stimulate the patient's own immune response to participate in the treatment of the disease. This is achieved with the company's proprietary AutoVac™ technology. With the AutoVac™ technology it is possible through active vaccination to selectively stimulate the immune system to down regulate the amount of disease causing proteins such as the protein IL5, which is known to be important to the progression of asthma.

Important notice: This press release may contain forward-looking statements, which are subject to considerable uncertainty. We would like to caution you that actual results might differ materially from those projected in any forward-looking statements made herein.



To the Copenhagen Stock Exchange and the Press

Release no. 17/2001

Pharmexa initiates phase I/II trial in breast cancer in the United Kingdom

Pharmexa has received approval from the Medicines Controls Agency (MCA) and ethical committees, including conditional approval from the Gene Therapy Advisory Committee (GTAC) to initiate a phase I/II trial in breast cancer patients with the company's HER-2 DNA AutoVac™ therapeutic vaccine in the United Kingdom. On July 9, 2001 Pharmexa announced that the Danish health authorities had approved the trial in Denmark.

The primary objective of the trial is to evaluate the safety of Pharmexa's therapeutic vaccine. Other objectives are to observe if HER-2 specific killer cells as well as HER-2 specific antibodies can be induced with AutoVac™, and to evaluate on a preliminary basis the efficacy of the treatment in the form of tumour response. 27 female patients will be enrolled in the trial, which will take place at three hospitals in Denmark and at Hammersmith Hospital, London, where Professor Charles Coombes will be Clinical Investigator. Other Hospitals in the UK may also become involved in the trial at a later stage. Patients will be vaccinated with 5 separate vaccinations over a two-month period and will be informed of all relevant treatment options prior to enrolment. Pharmexa hopes to start the trial in the UK in October 2001, and preliminary data from the trial is expected during 2002. The trial in Denmark has already started and patients are being recruited.

Breast cancer is the most common cancer form among women and one of the most common causes of cancer death among women in the UK, where thousands of new cases of breast cancer are diagnosed, and about 13,000 patients die each year (13,020 women died of breast cancer in the UK in 1999 – The Cancer Research Campaign). Breast cancer is the most common single cause of death among women aged 35-54 years and current treatments rely on or work in conjunction with chemotherapy, which has unwanted and dangerous side effects.

Pharmexa's vaccine works by stimulating the patient's own immune system to attack the cancerous cells. With the AutoVac™ technology it is possible to stimulate the immune system to recognise a certain protein known to be important to the growth of the cancer in such a way that this protein is now down regulated or removed from the body by the immune system. The immune system attacks the protein with antibodies as well as with so-called killer cells that kills cancer cells expressing the protein.

Pharmexa's HER-2 pharmaccine constitutes an entirely new treatment paradigm in breast cancer. The goal is to develop a more effective treatment for late stage breast cancer patients where it may be possible in the long run to avoid chemotherapy and radiation treatment altogether.



The protein targeted by Pharmexa's therapeutic vaccine is a growth factor called HER-2. HER-2 is present in many cancer forms, including breast, ovary, uterus, stomach, bladder, prostate, colon and lung cancers. Pharmexa's HER-2 DNA AutoVac™ vaccine induces the immune system to launch killer cells against the cancer and in addition also leads to the creation of antibodies against the HER-2 protein. Pharmexa is also working on another anti-HER-2 product that works primarily through the creation of a very high level of antibodies. This product is in pre-clinical development and is expected to enter into clinical trials in patients within 18 months.

Pharmexa has established a clinical advisory board for the trials comprising Professor Henning Mouridsen, Rigshospitalet, Copenhagen, Professor Charles Coombes, Hammersmith Hospital, London and Professor Cornelis J. M. Melief, University Hospital, Leiden, the Netherlands, as external experts.

Hørsholm, September 24, 2001

Søren Mouritsen

Chief Executive Officer

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Pharmexa has entered into collaborative agreements with Ferring, Schering-Plough, H. Lundbeck and NeuroSearch. The company was founded in 1990 and has 110 employees, of which more than 90 are engaged in research and development. Pharmexa also owns 84% of Inoxell, a company that works with post-genomic technology.

To learn more about Pharmexa please visit our homepage at www.pharmexa.com.

Important notice: This press release may contain forward-looking statements, which are subject to considerable uncertainty. We would like to caution you that actual results might differ materially from those projected in any forward-looking statements made her in.



Notes T Edit rs:

How does Pharmexa's product work?

Pharmexa's vaccine works by stimulating the patient's own immune response to participate in the treatment of the cancer. This is achieved with Pharmexa's proprietary AutoVac™ technology. With the AutoVac™ technology it is possible to stimulate the immune system to recognise a certain protein known to be important for the growth of the cancer. Subsequently, the immune system attacks the protein and the cancer cell that expresses it with antibodies as well as with so-called killer cells.

The HER-2 protein is over expressed in up to 30% of breast cancers. HER-2 is a factor in the uncontrolled growth of the cancer cells and is usually associated with a poor prognosis for the patient. A number of treatment options exists against breast cancer, including the monoclonal antibody Herceptin, which works by targeting HER-2. This drug is in the process of achieving status as first line treatment in the United States and has, over the course of the last three years, achieved annual sales exceeding 275 million dollars.

Brief description of breast cancer and existing treatment options

Breast cancer is the most common cancer form among women and one of the most common causes of cancer death among women in the UK, where thousands of new cases of breast cancer are diagnosed, and about 13,000 patients die each year (13,020 women died of breast cancer in the UK in 1999 – The Cancer Research Campaign). Breast cancer is the most common single cause of death among women aged 35-54 years. Each year 1 or 2 women in every thousand will be newly diagnosed with breast cancer. 75% of these will be post-menopausal women. 1 in 9 women in the UK will develop the disease in their lifetime. There are striking differences in the incidence of breast cancer in different places. Breast cancer accounts for 28.4 deaths per one hundred thousand in England and Wales, but only 19.2 in France, and 5.8 in Japan. There are many possible reasons for these differences, for example climate, diet, genetic inheritance, environmental toxins, patterns of birth control or breast feeding, age at first pregnancy. Women moving from low incidence to high incidence countries seem to acquire the higher risk of their new country.

Pharmexa's product is aimed at the same target as Herceptin, but there are two significant differences: Firstly, Pharmexa's product leads to the formation of killer cells, which selectively attack the cancer cells over-expressing HER-2. In this way Pharmexa hopes in the longer run to avoid the use of chemotherapy and radiation treatment altogether. Herceptin does not lead to the formation of killer cells and it is therefore necessary to combine it with chemotherapy and radiation treatment, since Herceptin cannot kill the cancer cells. Secondly, Pharmexa's product induces the patient's immune system to create its own antibodies and these antibodies are known to be more effective than artificial antibodies, which are administered intravenously at a hospital, as is the case with Herceptin.

Herceptin was recently approved for the treatment of breast cancer in Denmark, but with a price of approximately DKK 100,000 for six months treatment, its use in Denmark and other European countries has been limited. Common to Herceptin and other monoclonal antibodies are their very high production costs and the large amount of product that needs to be administered. There will therefore be significant economic advantages with Pharmexa's technology, because production costs as well as the amount of product that needs to be administered will be much smaller, and hospitalisation during administration is not necessary.



What is Pharmexa's strategy in the breast cancer area?

Pharmexa has kept all rights in the company's HER-2 AutoVac™ program. It is Pharmexa's strategy to take the product through the initial clinical phases and to proof of concept in phase II before the program is outlicensed to a third party. Pharmexa has the financial resources to follow this strategy and has in addition, over the course of the last year, established a development department consisting of some of the most experienced drug developers in Scandinavia. With this support Pharmexa expects to add significant value to its HER-2 AutoVac™ program in the coming years.



To the Copenhagen Stock Exchange and the Press

Not for distribution in the United States

Release no. 22/2001

Pharmexa announces AutoVac™ cancer license option

Pharmexa has signed an agreement with Lexigen Pharmaceuticals Corp., USA. Under the agreement, Lexigen will have a one-year, exclusive option to acquire an exclusive license to a therapeutic cancer vaccine (pharmaccine) based on Pharmexa's proprietary AutoVac™ technology.

The agreement covers one cancer target, which the parties have agreed not to disclose. The target is a self-protein known to be involved in specific cancers. Lexigen and Pharmexa believe that active vaccination against this protein may have beneficial effects for treatment of certain forms of cancers.

If Lexigen exercises its option to acquire an exclusive license, it or an affiliate which enters into the license will be responsible for any further clinical development, large-scale manufacturing and worldwide commercialization of resulting products for the treatment of cancer.

Lexigen has paid Pharmexa a small signing fee to enter into the agreement. If Lexigen decides to exercise its option to acquire an exclusive license, Pharmexa expects to receive further upfront- and milestone payments as well as royalties on sales of marketed products under such license terms.

Dr. Søren Mouritsen, CEO of Pharmexa says: "Lexigen is an ideal potential licensee for Pharmexa because of their demonstrated commitment and expertise in the oncology and immunotherapy field. At the same time this agreement confirms the potential for the AutoVac[™] technology in the cancer field."

The agreement will have a minor positive impact on Pharmexa's result of operations for 2001.

Hørsholm, December 17, 2001

Søren Mouritsen Chief Executive Officer

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N te to editors:

Lexigen Pharmaceuticals, Corp. is located in Lexington, Massachusetts and is a subsidiary of Merck KGaA of Darmstadt, Germany. Its two-fold mission is to develop treatments for serious and life-threatening diseases and to build a pharmaceutical platform that will lead to new therapies. Lexigen's Project: Campus 2002, which is currently underway, will result in a new, state-of-the-art research facility on 47 acres located on the border of Bedford, Billerica and Burlington.

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Pharmexa has entered into collaborative agreements with Ferring, Schering-Plough, H. Lundbeck and NeuroSearch. The company was founded in 1990 and has 111 employees, of which more than 90 are engaged in research and development. Pharmexa also owns 83,3% of Inoxell, a drug development company based on post-genomics technology.

Pharmexa's approach in cancer is to stimulate the patient's own immune response to participate in the treatment of the disease. This is achieved with the company's proprietary AutoVac™ technology. With the AutoVac™ technology it is possible to point out to the immune system proteins, which are known to be important to the progression of the disease in such a way that these proteins are now fought by the immune system.

Further information on Pharmexa is available on our website www.pharmexa.com.

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To the Copenhagen Stock Exchange and the press

Not for distribution in the United States

Release no. 23/2001

Positive change in Pharmexa's collaboration with Schering-Plough Animal Health

In March 2000 Pharmexa entered into a broad license agreement with Schering-Plough Animal Health. The agreement gives Schering-Plough a global right to use Pharmexa's patented AutoVac™ technology in the veterinary field. The agreement is further described in Pharmexa's annual report 2000 and on the company's homepage www.pharmexa.com.

On Schering-Plough's initiative the exclusivity period of this agreement has now been changed so that the period in which the agreement cannot be terminated has been extended with one year. Following this, the agreement cannot be terminated prior to September 2003.

Søren Mouritsen, CEO in Pharmexa says: "The collaboration with Schering-Plough has been progressing very well and Schering-Plough is now about to commit significant additional resources into this field. It is in this connection that they wanted an extension of their exclusivity period."

Hørsholm, December 19, 2001

Søren Mouritsen

Chief Executive Officer

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